



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,126	04/09/2001	Ki-Chul Kim	P56260	5986
7590	08/19/2005		EXAMINER YAO, KWANG BIN	
Robert E. Bushnell 1522 K Street, N.W., Suite 300 Washington, DC 20005-1202			ART UNIT 2667	PAPER NUMBER

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/828,126	Applicant(s) KIM, KI-CHUL	
	Examiner Kwang B. Yao	Art Unit 2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5,10,11,15 and 28-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5,10,11,15 and 28-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 5, 10, 11, 15, 28-37 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 5, 10, 11, 15, 28, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida (US 5,995,828) in view of Leung et al. (US 6,466,964).

Nishida discloses a communication system comprising the following features: regarding claim 1, method comprising the steps of: forming a common cell area (column 5, lines 19-33) in which a wireless public communication service and a wireless in-building (Fig. 1, PBX 100) communication service are available through a private (Fig. 1, PBX 100) base station; requesting a communication service at a mobile terminal in the common cell area (column 5, lines 19-33);

Art Unit: 2667

determining (column 6, line 30 to column 9, line 7), in response to the requesting of the communication service, whether the mobile terminal is registered (column 6, lines 50-56) for the wireless in-building (Fig. 1, PBX 100) communication service; providing the wireless in-building (Fig. 1, PBX 100) communication service to a registered (column 6, lines 50-56) mobile terminals; regarding claim 10, wherein signals from the registered (column 6, lines 50-56) mobile terminal are outputted to at least one antenna (FIG. 1, RADIO INTERFACE 103) mounted in said common cell area (column 5, lines 19-33), and said at least one antenna (FIG. 1, RADIO INTERFACE 103) is coupled to the wireless in-building (Fig. 1, PBX 100) communication system; regarding claim 15, a unified in-building (Fig. 1, PBX 100) communication apparatus connected to a public land mobile network, said apparatus comprising: a private (Fig. 1, PBX 100) base station for forming a common cell area (column 5, lines 19-33) in which a public land mobile network service and an in building wireless network service are available; a call manager responsive to a communication request from a mobile terminal in the common cell area (column 5, lines 19-33) for determining (column 6, line 30 to column 9, line 7) whether an in-building (Fig. 1, PBX 100) wireless network of the mobile terminal is registered (column 6, lines 50-56), and controlling provision of a corresponding service according to a result of the determination (column 6, line 30 to column 9, line 7); and a public/private (Fig. 1, PBX 100) communication service unit responsive to control by said control manager for providing the in-building (Fig. 1, PBX 100) wireless network service to a registered (column 6, lines 50-56) mobile terminal; regarding claim 28, wherein the wireless in-building (Fig. 1, PBX 100) communication service provided to the registered (column 6, lines 50-56) mobile terminal includes a communication service between the registered (column 6, lines 50-56) mobile

Art Unit: 2667

terminal and a wire extension terminal; regarding claim 29, wherein the wireless in-building (Fig. 1, PBX 100) communication service provided to the registered (column 6, lines 50-56) mobile terminal includes a communication service between the registered (column 6, lines 50-56) mobile terminal and a wireless extension terminal. See column 1-9.

Nishida does not disclose the following features: regarding claim 1, bypassing the communication service request of an unregistered mobile terminal to the public land mobile network; regarding claim 5, wherein the communication service includes voice and data services; regarding claim 11, wherein the registered mobile terminal communicates with one of a wire extension terminal and a wireless extension terminal, and the registered mobile terminal wirelessly performs a data service through an Internet protocol network; regarding claim 15, for controlling an unregistered mobile terminal for connection to the public land mobile network.

Leung et al. discloses a communication system comprising the following features: regarding claim 1, bypassing the communication service request of an unregistered (Fig. 3A, steps 312, 314, 316) mobile terminal to the public land mobile network (Fig. 1, Home Agent 8); regarding claim 5, wherein the communication service includes voice and data services (Fig. 1, PC 16 and Mobile Node 14); regarding claim 11, wherein the registered mobile terminal communicates with one of a wire extension terminal and a wireless extension terminal, and the registered mobile terminal wirelessly performs a data service through an Internet protocol network (Fig. 1, Internet 4); regarding claim 15, for controlling an unregistered (Fig. 3A, steps 312, 314, 316) mobile terminal for connection to the public land mobile network (Fig. 1, Home Agent 8). See column 1-19. It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system Nishida, by using the features, as taught by Leung

Art Unit: 2667

et al., in order to provide an efficient data communication system by enabling a node that does not support Mobile IP to roam to various FAs. See Leung et al., column 3, lines 4-7.

5. Claims 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida (US 5,995,828) in view of Leung et al. (US 6,466,964) as applied to claims 1, 15 above, and further in view of Sayers et al. (US 6,729,929).

Nishida and Leung et al. disclose the claimed limitations above. Nishida and Leung et al. do not disclose the following features: regarding claim 30, wherein the wireless in building communication system is connected to an Internet protocol network through a local area network; regarding claim 31, wherein the wireless in building communication service provided to the registered mobile terminal includes a data communication service between the registered mobile terminal and an Internet protocol network; regarding claim 32, wherein the public/private communication service unit comprises: an Internet protocol private branch exchange for performing switching for establishing communication between a mobile terminal in the common cell area and a wire extension terminal, and for providing a path between a wireless extension terminal and one of a public switched telephone network and an integrated service digital network; and a private base station controller for allocating a vocoder in response to a call request of the mobile terminal in the common cell area, and for providing a communication path to the mobile terminal in the common cell area; regarding claim 33, a router for providing access between the unified in building communication apparatus and an Internet protocol network; and a local area network switch connected to the unified in building communication apparatus through the router for switching data of the unified in building communication apparatus, and for

Art Unit: 2667

connecting the unified in building communication apparatus to the Internet protocol network through a local area network.

Sayers et al. discloses a communication system comprising the following features: regarding claim 30, wherein the wireless in building (column 18, lines 61-63) communication system is connected to an Internet protocol network (FIG. 2, INTERNET 25) through a local area network (Fig. 2, LAN 24-1); regarding claim 31, wherein the wireless in building (column 18, lines 61-63) communication service provided to the registered mobile terminal includes a data communication service between the registered mobile terminal and an Internet protocol network (FIG. 2, INTERNET 25); regarding claim 32, wherein the public/private (FIG. 1, PRIVATE WIRELESS NETWORK 22; FIG. 3, PRIVATE WIRELES REGION 211) communication service unit comprises: an Internet protocol private (FIG. 1, PRIVATE WIRELESS NETWORK 22; FIG. 3, PRIVATE WIRELES REGION 211) branch exchange for performing switching for establishing communication between a mobile terminal in the common cell area (FIG.3; and column 11, lines 47-67) and a wire extension terminal, and for providing a path between a wireless extension terminal and one of a public switched telephone network (FIG. 2, PSTN 26) and an integrated service digital network (FIG. 2, ISDN 28); and a private (FIG. 1, PRIVATE WIRELESS NETWORK 22; FIG. 3, PRIVATE WIRELES REGION 211) base station controller for allocating a vocoder (column 3, lines 23-28) in response to a call request of the mobile terminal in the common cell area (FIG.3; and column 11, lines 47-67), and for providing a communication path to the mobile terminal in the common cell area (FIG.3; and column 11, lines 47-67); regarding claim 33, a router for providing access between the unified in building (column 18, lines 61-63) communication apparatus and an Internet protocol network

Art Unit: 2667

(FIG. 2, INTERNET 25); and a local area network (Fig. 2, LAN 24-1) switch connected to the unified in building (column 18, lines 61-63) communication apparatus through the router for switching data of the unified in building (column 18, lines 61-63) communication apparatus, and for connecting the unified in building (column 18, lines 61-63) communication apparatus to the Internet protocol network (FIG. 2, INTERNET 25) through a local area network (Fig. 2, LAN 24-1). See column 9-28. It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system Nishida and Leung et al., by using the features, as taught by Sayers et al., in order to provide an efficient data communication system by permitting users to operate freely in both public and private wireless networks using standard mobile stations while achieving high private network data rates. See Sayers et al., column 8, lines 21-25.

6. Claims 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida (US 5,995,828) in view of Leung et al. (US 6,466,964) and Sayers et al. (US 6,729,929) as applied to claims 15, 32, 33 above, and further in view of Lee et al. (US 6,885,668).

Nishida, Leung et al. and Sayers et al. disclose the claimed limitations above. Moreover, Sayers et al. discloses the following features: regarding claim 35, wherein the private base station controller (FIG. 2, HUB 23) is connected to a private base station (FIG. 2, P-BTS 27) and to the public land mobile network (FIG. 1, PUBLIC WIRELESS NETWORK 15) through respective communication lines, and includes a local interface assembly for providing an interface therebetween; regarding claim 36, wherein the local interface assembly generates and outputs inter process communication data from communication data which is received from the private base station (FIG. 2, P-BTS 27) and the public land mobile network (FIG. 1, PUBLIC

Art Unit: 2667

WIRELESS NETWORK 15), and outputs communication data from inter process communication data which is transmitted to the private base station (FIG. 2, P-BTS 27) and the public land mobile network (FIG. 1, PUBLIC WIRELESS NETWORK 15). See column 9-28.

Nishida, Leung et al. and Sayers et al. do not disclose the following features: regarding claim 34, a transcoder and selector bank interface for providing an interface between the local area network switch and the private base station controller; regarding claim 37, a high capacity interprocess communication node board assembly connected to the local interface assembly, the transcoder and selector bank interface, and the call manager, respectively, for performing inter-process communication data processing between the local interface assembly, the transcoder and selector bank interface, and the call manager.

Lee et al. discloses a communication system comprising the following features: claim 34, a transcoder and selector bank interface (Fig. 1, Transcoder Selector Bank TSB 22) for providing an interface between the local area network switch and the private base station controller; regarding claim 37, a high capacity interprocess communication node board assembly connected to the local interface assembly (LCIN 21), the transcoder and selector bank interface (Fig. 1, Transcoder Selector Bank TSB 22), and the call manager (Fig. 1, call control processor CCP 25), respectively, for performing inter-process communication data processing between the local interface assembly, the transcoder and selector bank interface (Fig. 1, Transcoder Selector Bank TSB 22), and the call manager (Fig. 1, call control processor CCP 25). See column 1-11. It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Nishida, Leung et al. and Sayers et al., by using the features, as taught by

Art Unit: 2667

Lee et al., in order to provide an efficient data communication by processing voice data and low-speed packet data. See Lee et al., column 1, lines 26-28.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

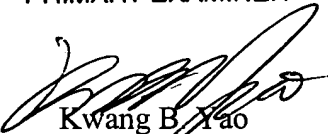
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwang B. Yao whose telephone number is 571-272-3182. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2667

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KWANG BIN YAO
PRIMARY EXAMINER



Kwang B. Yao
August 17, 2005